III. Needs Summary

A. Introduction

Needs have been compiled from individual interviews with TMB and BMC members, agency documentation, business plans, agency surveys, agency inventories, and general fact finding efforts. The results of this input have been aggregated into this Needs Summary and organized into the following categories:

- Service Delivery
- Operations
- Architecture
- Management and People
- Funding

Each category addresses one or more summary level needs from the detailed needs listings that were identified as themes across agencies. Source(s) for the needs are noted beside each item. Note these are summarized needs and as such, were identified through multiple sources. Needs identified within this document are addressed in Sections V (Technology Environment) and VI (Strategies) of the strategic technology plan.

B. Summary Needs

1. Service Delivery

Service delivery involves providing a wide variety of functions directly to end users. Resources being utilized range from the staff involved, to processes and procedures, to work methods and development tools. Service delivery occurs throughout the entire technology lifecycle for each of the County's systems; that is, during development, implementation, operations, and maintenance activities. Proactive service delivery, help desk support, end-user training, and service-level commitments were common needs identified within the review and are addressed below.

a) Proactive Service Delivery

The overall service delivery approach needs to be from a proactive position. Being proactive means staying current with work loads, knowing how systems are performing, determining ahead of time what systems are, or will be, underperforming and taking corrective action. Being proactive also means understanding the client situation and future client needs to direct services accordingly.

NEEDS
• Review and identify any barriers to proactive service delivery [Sources: Business Plan, Interviews, Survey]

b) *Help Desk Support*

A centralized enterprise help desk has been established. This help desk supports approximately 10,000 users. The supporting software is Heat, which has been heavily customized.

NEEDS

- Capability to generate reports and query the help desk database. [Source: Interviews, Survey]
- Ability to follow-up on assigned tickets. [Source: Interviews]
- Clear escalation and resolution roles/responsibilities. [Source: Interviews]
- Coordinated agency-level help desk tools. [Sources: Interviews, Survey]
- Centralized/Integrated help desk function. [Sources: Interviews, Inventory]
- Robust reporting on service levels, performance, and workload. [Source: Interviews]
- After-hours support. [Source: Survey]
- Trained/Knowledgeable help desk staff. [Source: Interviews]

c) *End-User Training*

End-user training for staff is limited. Lack of funds for training has left employees to rely largely on on-the-job training with little opportunity for additional learning outside of the agency.

NEEDS

- Training plans and budgets. [Sources: Interviews, Survey]
- Targeted training on MSA. [Source: Survey]
- Bonus/Incentive program to reward training efforts. [Source: Interviews]

d) *Service- Level Commitments*

Service-level commitments allow agencies to implement service quality, quantity, cost and cost measurement standards for vendor relationships, apply a review process and implement quality assurance programs.

NEEDS

- Formal agreements between all agencies and the ITS help desk. [Source: Interviews]
- Agreement standards that specify response time. [Source: Interviews]
- Formal agreements with all vendors. [Source: Interviews]

2. **Operations**

Operations includes those activities required to keep the County's systems running on a day-to-day basis. This includes the establishment of standards, controlling and managing data and applications, and ensuring that systems are operational. Within King County, several areas of concern within Operations include the need to address unattended business functions, the need to establish standards across agencies, and the need to develop data management tools.

a) *Unattended Business Functions*

Due to a variety of issues, a number of essential business functions have not received resource or focus.

NEEDS

- Asset management [Source: Interviews]
- Disaster recovery [Sources: Interviews, Inventory]
- Security [Source: Interviews]
- Server planning [Source: Interviews]
- Application design concurrent with customer needs [Source: Interviews]
- Bill auditing [Source: Interviews]
- Designing for cost avoidance [Source: Interviews]
- Voice mail systems [Sources: Business Plan, Interviews]
- An overall plan with deliverables, milestones, budget, and responsibilities for each area above. [Source: Interviews]

b) *Standards*

From an operational perspective, standards for procedures are needed. Standards allow the organization to take advantage of the inherent efficiencies that a large organization has the opportunity to achieve.

NEEDS

- Established standards in each of the following areas
  → Documentation [Sources: Interviews, Survey]
  → Security [Source: Interviews]
  → Maintenance [Source: Interviews]
  → Disaster recovery [Sources: Interviews, Inventory]

c) *Data Management*

Two issues currently face the County in regard to data management. These include the lack of planning and coordination around the establishment of an enterprise-level data management plan, and secondly, the lack of data ownership. Data ownership defines who is ultimately responsible for maintaining the integrity of the data (determining who has access to the data, how the data can be used, etc.).

NEEDS

- Creation of an enterprise-level data management plan. [Sources: Interviews, Inventory]
- Cross-agency coordination of data and information management. [Sources: Interviews, Inventory]
- Defined roles and responsibilities for data ownership. [Sources: Business Plan, Interviews, Inventory]

3. **Architecture (web, applications, and infrastructure)**

    Architecture is the overall design and structure of a system. This includes the hardware and software required to run the system. Architecture therefore incorporates needs related to applications, hardware, network, e-commerce/e-business, integration/connectivity, legacy systems, data warehousing, telephone, voice mail unified messaging, wireless, operating systems, databases, middleware, user interfaces and voice, data, and video convergence. Within this area, a number of needs were identified related to the areas identified above. These are discussed in more detail below:

    a) *Financial Systems*

        Finance utilizes two separate financial systems including IBIS and ARMS to support the County's agencies. In some cases, both IBIS and ARMS are utilized to support a single agency. Additionally, neither system is considered current and risks losing support from the vendor.

NEEDS
• Single, enterprise financial accounting system. [Sources: Interviews, Inventory] • Current vendor-supported financial system. [Sources: Interviews, Inventory] • Capability to easily generate management reports from the finance system. [Sources: Interviews, Survey] • Ad-hoc reporting responsibilities. [Sources: Interviews, Survey]

    b) *Human Resource/Payroll Systems*

        Human Resources maintains two primary systems. These systems are PeopleSoft and MSA. In addition to these systems there are a number of ancillary databases and specialized systems to support additional needs. These systems include Signa, OPAC, pararisk, and CAMS.

NEEDS
• Single, enterprise human resource/payroll system. [Sources: Interviews, Inventory] • Streamlined human resource procedures. [Source: Interviews] • Ability for employees to be transferred between agencies. [Source: Interviews] • Streamlined human resource maintenance procedures. [Source: Interviews] • Human resource reporting capabilities. [Sources: Interviews, Survey]

c) *Law, Safety, and Justice*

The Law, Safety, and Justice system is comprised of a number of discrete systems that individually meet a variety of different needs. Over time, the focus has been on developing additional localized systems rather than devoting resources toward improving existing applications. However, as this system continues to age, support available from mainframe programmers will diminish as those skills become less available in the marketplace. While it is not necessary for the County to replace this system immediately, the County needs to give consideration to the long-term plan for this system. This plan should include opportunities for standardization as well as a focus on centralization.

NEEDS

- Short- and long-term plans for addressing LS&J systems migration. [Sources: Business Plan, Interviews]
- Integration plans. [Sources: Business Plan, Interviews, Inventory]
- Standardized data, tools, and processes. [Sources: Business Plan, Interviews]
- Centrally managed systems. [Sources: Business Plan, Interviews]

d) *GIS*

GIS supports essential functions within the County including public health, elections, transportation, permitting, utilities, assessment, and taxation. Prior to April of 2001, the GIS organization was split among different agencies. In April of 2001, the County combined these various areas into one GIS organization under the Department of Natural Resources and Parks.

NEEDS

- Integration between GIS and non-GIS systems. [Source: Interviews]
- Documented and enforced GIS standards. [Source: Interviews]
- Integration between legacy and GIS databases. [Source: Interviews]
- GIS data warehouse. [Source: Interviews]

e) *Document Management*

Document management tools automate and streamline storing and retrieving records. There is no Countywide document management tool in place.

NEEDS

- Streamlined document retrieval process. [Sources: Business Plan, Interviews]
- Ability to share information between agencies. [Sources: Business Plan, Interviews, Survey]
- Tool for tracking documents. [Source: Interviews]

f) Legacy Systems

Legacy systems are those that are aging, based on older technology platforms, and/or built to support non-current business processes. A number of legacy systems are in place at the County. These include, but are not limited to, ARMS, IBIS, and MSA.

NEEDS

- Upgrade and migration plan for all legacy applications. [Sources: Business Plan, Interviews, Inventory]
- Prioritization of legacy systems to be replaced in the short term. [Source: Interviews]

g) Documentation of Existing Applications

Documentation stands as a record for technical staff and end-users denoting the correct maintenance and use for systems. Many of the County's systems lack such documentation. Where it exists, it is often incomplete or non-current.

NEEDS

- Improved documentation of specialized systems. [Sources: Business Plan, Interviews, Inventory]
- Specified policies, procedures, and processes related to system use. [Sources: Business Plan, Interviews, Survey]

h) Improved Integration Between Systems

System integration speaks to connections between systems that hold and process related and/or redundant information.

NEEDS

- Coordinated systems development. [Sources: Business Plan, Interviews, Survey]
- Identification and prioritization of integration points between systems. [Sources: Interviews, Inventory]
- Plan for implementing identified system integrations. [Sources: Interviews, Inventory]

i) Planning and Design

Planning and design efforts seek to break down and identify the tasks and components needed to deliver specified functionality.

NEEDS

- King County needs short- and long-term plans in the following areas:
    → Web [Source: Interviews]
    → System integration [Sources: Business Plan, Interviews, Inventory]
    → Infrastructure [Sources: Interviews, Inventory]
    → I-NET [Sources: Business Plan, Interviews]

j)   Cabling Standards and Upgrades

King County does not appear to enforce a standard cabling requirement. A variety of cabling currently exists within various facilities and across all agencies. Cabling currently includes CAT 3, 4, 5, 5e along with fiber and coaxial.

NEEDS

- Cable upgrades are needed in the following locations:

  → Cat3 cables in Courthouse and 10th floor of Bank of Cal. Bldg need to be upgraded to Cat5. [Sources: Business Plan, Interviews, Inventory]

  → Motor pool garage and building F, G, and J at the Renton consolidated maintenance facility. [Sources: Business Plan, Interviews, Inventory]

  → King County Correctional Facility and Youth Services Center. [Sources: Business Plan, Interviews, Inventory]

  → Regional Justice Center [Sources: Business Plan, Interviews, Inventory]

  → A set of cable infrastructure standards that speak to all aspects of structured cabling. [Sources: Interviews, Inventory]

  → Overall cabling needs include centrally managing cable standards. [Source: Interviews]

k)   Telephony

Countywide standards are not currently in place for phone or voice mail systems. This prevents the integration of phone and voice mail systems across agencies. Additionally, current technology cannot be supported by some of the older telephony systems.

NEEDS

- Improving performance of phone system. [Sources: Interviews, Survey]
- Countywide telephony standard. [Sources: Interviews, Inventory]
- Telephony features such as skill-based routing, IVR, and CTI. [Source: Interviews]
- A voice messaging system that is able to deliver state-of-the-art application solutions. [Source: Interviews]
- A detail recording capability to enable agencies to manage any system abuse of long distance calling or to measure call activity by group or individual. [Source: Interviews]

l)   Hardware Standards

Standards for hardware and purchasing are not in place. Lack of hardware standards increases support costs and complicates software upgrades.

NEEDS

- Countywide hardware standards. [Sources: Interviews, Inventory]
- A mechanism for enforcing standards. [Sources: Business Plan, Interviews, Survey]

m) *Internet/Intranet Access*

Internet and intranet technologies are used to enhance employee and public access to County data.

NEEDS

- Better linkages between agencies. [Sources: Interviews, Survey]
- Access to more "real time" data over the web. [Sources: Interviews, Survey]
- Capabilities for publishing directly to the Internet. [Sources: Interviews, Survey]
- Proactive Internet/intranet planning processes. [Source: Interviews]
- Web applications policy. [Source: Interviews]

n) *Upgrade and Replace Dated Systems*

The County maintains a number of outdated legacy systems. The Pulsepoint system, AN07, general software applications, and mainframe shortcomings were all specific points of interest in this regard.

NEEDS

- Update or replaced dated systems. [Sources: Business Plan, Interviews, Inventory]
- Integrate standalone applications. [Sources: Business Plan, Interviews, Inventory]
- Applications that are compliant with national and current market and standards. [Sources: Interviews]

o) *Server Capacity*

Servers store data and applications used and accessed over the County's network. Current server capacities for some agencies are inadequate. The Superior Court and Department of Transportation also indicated that additional server capacity is inadequate and that faster processing capabilities are needed.

NEEDS

- Upgraded capacity for the Office of Public Defense, Superior Court, and Department of Transportation. [Sources: Interviews, Inventory]
- Faster processing capabilities for Superior Court and Department of Transportation. [Sources: Interviews, Inventory]

4. **Management and People**

Management and People focuses on leadership within the organization, span of control/chain of command, privacy and security, standards, ongoing planning, business analysis, staffing levels, expertise, and skills. Common themes identified that fall under the Management and People category include the need for strengthened leadership and management, technician training, staff retention and coordination between agencies.

a) *Strengthened Leadership and Management*

Leadership and management are at the helm of the organization.

NEEDS

- Access to information regarding customers' changing needs. [Sources: Business Plan, Interviews, Survey]
- Capability to synchronize technology advances with the County's evolving governance structure. [Sources: Business Plan, Interviews]
- Management-led changes to business practices and technology projects. [Sources: Interviews, Survey]

b) *Technician Training*

Even though there are very capable technology employees working hard to address the immediate technology needs of the County, the focus has been on maintaining existing systems rather than developing and implementing newer, state-of-the-art systems with market standard technologies.

NEEDS

- Employee training plans. [Sources: Interviews, Survey]
- Targeted training in current market technologies, leadership, project management, and business analysis. [Sources: Interviews, Inventory]

c) *Staff Retention*

Employees are a core investment for the County, and there are legitimate concerns that this resource is at risk due to competition for technical skills in the market.

NEEDS

- Continuity of knowledge and maintenance of County systems. [Source: Interviews]
- Capability to attract and retain staff. [Sources: Business Plan, Interviews, Survey]
- Competitive pay scales. [Source: Interviews]
- Review of compensation levels. [Source: Interviews]

d) *Agency Coordination*

Given the inter-related functions that occur across agency boundaries, there is a clear need to strengthen coordination regarding communication, processes, plans, systems, databases, and standards. Many agencies have overlapping goals and objectives, opportunities for shared services, and the potential to take advantage of economies of scale.

NEEDS

- Coordination of Roads' databases. [Source: Interviews]
- Asset management tools/audits. [Sources: Interviews, Inventory]
- Clear communication mechanisms between ITS and agencies. [Sources: Interviews, Survey]

5. **Funding**

Funding is the allocation of revenue for specific projects and agencies. Providing adequate funding within the County is a critical issue. Five general needs were established in regard to County funding. These include funding for CX agencies, the need for new and creative sources of funding, the need for more detail within budgets, and scenario modeling.

a) *Funding CX Agencies*

CX agencies are not positioned with adequate resources to fund either technology development or ongoing deployment. As a result, these agencies maintain dated and obsolete systems including thousands of outdated desktops and software applications.

NEEDS
• Adequate and reliable technology funding. [Sources: Interviews, Survey]
• Resources to enable deployment of current technologies. [Source: Interviews]

b) *New and Creative Sources of Funding*

The County is challenged by decreasing revenue sources at a time when new technologies and infrastructure are needed.

NEEDS
• Alternatives for new revenue sources. [Source: Interviews]
• Planned and balanced source for funding capital and operations expenditures. [Source: Interviews]

c) *Budget Detail*

Current budgeting processes focus on summary agency budgets and do not include technology specific detail.

NEEDS
• Ability to assess cost versus benefit of projects within and across agencies. [Source: Interviews]
• Capability to identify opportunities for realizing efficiencies. [Source: Interviews]

d) *Scenario Modeling*

The County is currently not able to run budget to actual comparisons or current year to previous year comparisons from a centralized budgeting system. In the past, actual data was loaded from ARMS and IBIS to provide year to date versus budget analysis and reports. This effort was determined to be extremely cumbersome and time consuming and no longer occurs. The County does coordinate and develop a quarterly actual to fund/source report based on input from each agency, however there is no way to verify the accuracy of data reported.

NEEDS

- Modeling capabilities to monitor agency and Countywide budgets. [Source: Interviews]
- Processes/Tools to enable budget reporting from a centralized budgeting system. [Source: Interviews]